IN THE CLAIMS:

Please cancel claims 1-21, without prejudice and add the following new claims 22-42:

22. (New) A method of producing a calibrating body, said method comprising the steps of:

a) forming a carbon fiber composite body in a desired shape from a porous material from a carbon-containing matrix, into which carbon fibers are embedded; and

b) densifying the composite body by fluid infiltration of Si, which is essentially converted by reaction with carbon to SiC, wherein the overall portion of Si and SiC is a maximum of 60% by volume, and wherein the carbon fibers have a minimum length of 3 mm.

23. (New) Method according to claim 22, wherein in the composite body the portion of free Si is < 10% by volume.

24. (New) Method according to claim 23, wherein in the composite body the portion of free Si is < 1% by volume.

25. (New) Method according to claim 22, wherein in the composite body the matrix components have a maximum grain size of 100 μm.

26. (New) Method according to claim 22, wherein the open porosity of the composite body is < 5% by volume.

27. (New) Method according to claim 22, wherein the composite body contains evenly distributed additives for adjusting the elongation behavior.

28. (New) Method according to claim 27, wherein the additives are in powder form.

29. (New) Method according to claim 28, wherein the additives are carbon powder.

30. (New) Method according to claim 28, wherein the additives are SiC powder.

31. (New) Method according to claim 22, wherein in the composite body the carbon fibers are in the form of mats.

32. (New) Method according to claim 31, wherein the mats are in a form selected from the group consisting of woven and knitted.

33. (New) Method according to claim 31, wherein the mats extend in the x-y plane directions, and are stacked on top of one another in the z-direction, with the x-, y- and z-directions forming a rectangular coordinate system.

34. (New) Method according to claim 33, wherein the mats in their structure and layout in the z-direction are placed symmetric to a central plane.

35. (New) Method according to claim 34, wherein the mat placement exhibits an orthotropic structure.

36. (New) Method according to claim 31, wherein the mats are arranged in a quasi-isotropic structure.

37. (New) Method according to claim 22, wherein in the composite body, the fibers are arrayed two-dimensionally.

38. (New) Method according to claim 22, further comprising the step of thermally aging the composite body to reduce its internal stress.

39. (New) Method according to claim 38, wherein the thermal aging takes place in a temperature range between +100°C and -100°C.

40. (New) Method according to claim 38, wherein the thermal aging is done in a number of cycles between 1 and 5.

41. (New) Method according to claim 22, wherein the composite body exhibits a carbon content of 76% by volume, an SiC content of about 17% by volume, a free Si content of about 5% by volume, and an open porosity of about 2% by volume.

42. (New) Method according to claim 22, further comprising the step of forming the calibrating body as a calibrating instrument selected from the group consisting of an end gauge, a precision gauge block, a standard measure, a standard of length, a linear measurement device,

a straightedge, a ruler, an angle measuring device and a coordinate measuring device.